AMENDMENTS TO THE CLAIMS

Claims 15-18 and 24-31 are pending. Claims 28-31 have been added. A complete listing of the current pending claims is provided below and supersedes all previous claims listing(s).

1-14. (Cancelled)

15. (Original) An apparatus comprising:

means for dividing p pins of an integrated circuit into n groups;

means for logically associating the pins of each group through an ExOR matrix; and

means for driving a plurality of scan chains in the integrated circuit with the logically associated pins.

16. (Original) The apparatus of claim 15, wherein said means for logically associating the pins further comprises:

means for generating $(p/n)^n$ logical associations, where p is the number of pins, and n is the number of groups of pins.

17. (Original) The apparatus of claim 15, wherein the number of scan chains is equal to the number of logical associations.

18. (Original) The apparatus of claim 15, wherein the ExOR matrix has n dimensions.

19-23. (Cancelled)

24. (Original) An article of manufacture comprising:

a computer readable medium storing a computer program comprising:

code for dividing p pins of an integrated circuit into n groups;

code for logically associating the pins of each group through an ExOR matrix; and

code for driving a plurality of scan chains in the integrated circuit with the logically associated pins.

25. (Original) The medium of claim 24, wherein said code for logically associating the pins further comprises:

code for generating $(p/n)^n$ logical associations, where p is the number of pins, and n is the number of groups of pins.

26.   (Original) The medium of claim 24, wherein the number of scan chains is equal to the number of logical associations.

27.   (Original) The medium of claim 24, wherein the ExOR matrix has n dimensions.

28.   (New) A method comprising:
dividing p pins of an integrated circuit into n groups;
logically associating the pins of each group through an ExOR matrix; and
driving a plurality of scan chains in the integrated circuit with the logically associated pins.

29.   (New) The method of claim 28, wherein said logically associating the pins further comprises:
generating $(p/n)^n$ logical associations, where p is the number of pins, and n is the number of groups of pins.

30.   (New) The method of claim 28, wherein the number of scan chains is equal to the number of logical associations.

31.   (New) The method of claim 28, wherein the ExOR matrix has n dimensions.